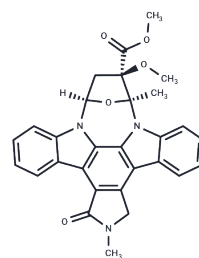


KT5823

## Chemical Properties

CAS No. :	126643-37-6
Formula:	C <sub>29</sub> H <sub>25</sub> N <sub>3</sub> O <sub>5</sub>
Molecular Weight:	495.53
Storage:	Store at low temperature Powder: -20°C for 3 years   In solvent: -80°C for 1 year <small>Actual storage temperature shall be subject to the COA.</small>



## Biological Description

Description	KT5823 is a selective and potent cGMP-dependent protein kinase (PKG) inhibitor with inhibitory effects on PKA and PKC. KT5823 increases thyroid-stimulating hormone-induced (Na <sup>+</sup> /I <sup>-</sup> symporter) NIS expression and iodide ion uptake by modulating sodium iodide symporter protein expression and activity in thyroid cells. KT5823 induces apoptosis.
Targets(IC50)	Apoptosis, Antibacterial, Antibiotic, PKA, PKC
In vitro	A staurosporine-related protein kinase inhibitor, KT5823, increases expression of the sodium/iodide symporter (NIS) and iodide uptake in thyroid cells induced by thyroid-stimulating hormone [3]. It arrests cells after the G0/G1 boundary and causes increases in the levels of apoptotic DNA fragmentation [2].

## Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.018 mL	10.0902 mL	20.1804 mL
5 mM	0.4036 mL	2.018 mL	4.0361 mL
10 mM	0.2018 mL	1.009 mL	2.018 mL
50 mM	0.0404 mL	0.2018 mL	0.4036 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

### Reference

Gadbois DM, et al. Multiple kinase arrest points in the G1 phase of nontransformed mammalian cells are absent in transformed cells. Proc Natl Acad Sci U S A. 1992 Sep 15;89(18):8626-30.

Chan SL, et al. Guanylyl cyclase inhibitors NS2028 and ODQ and protein kinase G (PKG) inhibitor KT5823 trigger apoptotic DNA fragmentation in immortalized uterine epithelial cells: anti-apoptotic effects of basal cGMP/PKG. Mol Hum Reprod. 2003 Dec;9(12):775-83.

Wyatt TA, et al. KT5823 activates human neutrophils and fails to inhibit cGMP-dependent protein kinase phosphorylation of vimentin. Res Commun Chem Pathol Pharmacol. 1991 Oct;74(1):3-14.

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